surface science

Abstracted/indexed in: Aluminium Industry Abstracts; Chemical Abstracts; Current Contents: Physical, Chemical and Earth Sciences; EI Compendex Plus; INSPEC; Metals Abstracts.

Contents

Volume 374 (1997) Nos. 1–3

Surface Science

HREELS study of CO oxidation on Ag(001) by O_2 or O
U. Burghaus, L. Vattuone, P. Gambardella and M. Rocca 1

Surface disordering, roughening and premelting of Ag(110)
T.S. Rahman, Z. Tian and J.E. Black 9

Long-range ordered, commensurate superstructures of large organic adsorbates: a LEED and STM study of EC4T/Ag(111)
C. Seidel, A. Soukopp, R. Li, P. Bäuerle and E. Umbach 17

Ab initio cluster model study of geometry and bonding character of atomic nitrogen chemisorbed on the Cu(100) and Ag(100) surfaces
J.M. Ricart, J. Torras, J. Rubio and F. Illas 31

Two-photon excitation processes and linewidths of surface and image states on Cu(111)
W. Wallauer and Th. Fauster 44

Growth modes and electronic properties of copper ultra-thin films on a V(100) surface
T. Valla, P. Pervan, M. Milun and K. Wandelt 51

Atomic structure of monolayer graphite formed on Ni(111)
Y. Gamo, A. Nagashima, M. Wakabayashi, M. Terai and C. Oshima 61

The structure and composition of vicinal CdTe(100) surfaces
K. Yong, A.J. Gellman and P.J. Sides 65

The electronic structure of In- and As-terminated InAs(001) surfaces
M.C. Håkansson, L.S.O. Johansson, C.B.M. Andersson, U.O. Karlsson, L.Ö. Olsson, J. Kanski, L. Ilver and P.O. Nilsson 73

Surface structure and spectroscopy of WO_2(012)
F.H. Jones, R.G. Egdell, A. Brown and F.R. Wondre 80

Desorption energy and lateral interaction energy in the adsorption systems of Rh, Pd, Ir and Pt on W(110)
J. Kołaczkiewicz and E. Bauer 95

Surface alloy formation and interdiffusion in $(\sqrt{5} \times \sqrt{5})$R27°–Yb/Al(001): a combined low-energy electron diffraction and X-ray photoelectron diffraction study
R. Fasel, M. Gierer, H. Bludau, P. Aebi, J. Osterwalder and L. Schlapbach 104

Quantum ab initio study of acetylene adsorption on NaCl(100). I. Topology and adsorption energy
A. Allouche 117

Spatio-temporal pattern formation during catalytic CO oxidation on a Pt(100) surface modified with submonolayers of Au
K. Asakura, J. Lauterbach, H.H. Rotermund and G. Ertl 125

Electrolyte interactions with vapor dosed and solution dosed carbon monoxide on platinum (111)
R.L. Borup, D.E. Sauer and E.M. Stuve 142

Structure of disordered ethylene adsorbed on Pt(111) analyzed by diffuse LEED: asymmetrical di-σ bonding favored
R. Döll, C.A. Gerken, M.A. Van Hove and G.A. Somorjai 151

Oxidation of cyclopropane with coadsorbed oxygen on Pt(111)
A.J. Franz, J.T. Ranney, J.L. Gland and S.R. Bare 162

Rotationally excited NO molecules incident on a graphite surface: in- and out-of-plane angular distributions
D. Glatzer, J. Häger, M. Fink and H. Walther 169

Rotationally excited NO molecules incident on a graphite surface: molecular rotation and translation after scattering
J. Häger, D. Glatzer, H. Kuze, M. Fink and H. Walther 181

Vibrational excitation of NO scattered from Cu(110)
E.K. Watts, J.L.W. Siders and G.O. Sitz 191

RAIRS and TPD study of CO and NO on β-Mo_2C
J. Wang, M. Castonguay, J. Deng and P.H. McBreen 197

Adsorption of H_2O on double layer stepped Si(111) surface
Ş. Katircioğlu and Ş. Erkoç 208

A vibrational spectroscopic study of the adsorption and dehydrogenation of cyclic C_6 hydrocarbons on the (1 × 1) and (5 × 20) surfaces of Pt{100}
C.L.A. Lamont, M. Borbach, R. Martin, P. Gardner, T.S. Jones, H. Conrad and A.M. Bradshaw 215

Vibrational dynamics of H atoms chemisorbed on metal (110) surfaces
E.S. Altshuler, D.L. Mills and R.B. Gerber 229

Contents continued on final page

0039-6028(19970310)374:1-3;1-W

surface science

Abstracted/indexed in: Aluminium Industry Abstracts; Chemical Abstracts; Current Contents: Physical, Chemical and Earth Sciences; EI Compendex Plus; INSPEC; Metals Abstracts.

Contents

Volume 374 (1997) Nos. 1–3

Surface Science

HREELS study of CO oxidation on Ag(001) by O_2 or O
U. Burghaus, L. Vattuone, P. Gambardella and M. Rocca 1

Surface disordering, roughening and premelting of Ag(110)
T.S. Rahman, Z. Tian and J.E. Black 9

Long-range ordered, commensurate superstructures of large organic adsorbates: a LEED and STM study of EC4T/Ag(111)
C. Seidel, A. Soukopp, R. Li, P. Bäuerle and E. Umbach 17

Ab initio cluster model study of geometry and bonding character of atomic nitrogen chemisorbed on the Cu(100) and Ag(100) surfaces
J.M. Ricart, J. Torras, J. Rubio and F. Illas 31

Two-photon excitation processes and linewidths of surface and image states on Cu(111)
W. Wallauer and Th. Fauster 44

Growth modes and electronic properties of copper ultra-thin films on a V(100) surface
T. Valla, P. Pervan, M. Milun and K. Wandelt 51

Atomic structure of monolayer graphite formed on Ni(111)
Y. Gamo, A. Nagashima, M. Wakabayashi, M. Terai and C. Oshima 61

The structure and composition of vicinal CdTe(100) surfaces
K. Yong, A.J. Gellman and P.J. Sides 65

The electronic structure of In- and As-terminated InAs(001) surfaces
M.C. Håkansson, L.S.O. Johansson, C.B.M. Andersson, U.O. Karlsson, L.Ö. Olsson, J. Kanski, L. Ilver and P.O. Nilsson 73

Surface structure and spectroscopy of WO_2(012)
F.H. Jones, R.G. Egdell, A. Brown and F.R. Wondre 80

Desorption energy and lateral interaction energy in the adsorption systems of Rh, Pd, Ir and Pt on W(110)
J. Kołaczkiewicz and E. Bauer 95

Surface alloy formation and interdiffusion in $(\sqrt{5} \times \sqrt{5})$R27°–Yb/Al(001): a combined low-energy electron diffraction and X-ray photoelectron diffraction study
R. Fasel, M. Gierer, H. Bludau, P. Aebi, J. Osterwalder and L. Schlapbach 104

Quantum ab initio study of acetylene adsorption on NaCl(100). I. Topology and adsorption energy
A. Allouche 117

Spatio-temporal pattern formation during catalytic CO oxidation on a Pt(100) surface modified with submonolayers of Au
K. Asakura, J. Lauterbach, H.H. Rotermund and G. Ertl 125

Electrolyte interactions with vapor dosed and solution dosed carbon monoxide on platinum (111)
R.L. Borup, D.E. Sauer and E.M. Stuve 142

Structure of disordered ethylene adsorbed on Pt(111) analyzed by diffuse LEED: asymmetrical di-σ bonding favored
R. Döll, C.A. Gerken, M.A. Van Hove and G.A. Somorjai 151

Oxidation of cyclopropane with coadsorbed oxygen on Pt(111)
A.J. Franz, J.T. Ranney, J.L. Gland and S.R. Bare 162

Rotationally excited NO molecules incident on a graphite surface: in- and out-of-plane angular distributions
D. Glatzer, J. Häger, M. Fink and H. Walther 169

Rotationally excited NO molecules incident on a graphite surface: molecular rotation and translation after scattering
J. Häger, D. Glatzer, H. Kuze, M. Fink and H. Walther 181

Vibrational excitation of NO scattered from Cu(110)
E.K. Watts, J.L.W. Siders and G.O. Sitz 191

RAIRS and TPD study of CO and NO on β-Mo_2C
J. Wang, M. Castonguay, J. Deng and P.H. McBreen 197

Adsorption of H_2O on double layer stepped Si(111) surface
Ş. Katircioğlu and Ş. Erkoç 208

A vibrational spectroscopic study of the adsorption and dehydrogenation of cyclic C_6 hydrocarbons on the (1 × 1) and (5 × 20) surfaces of Pt{100}
C.L.A. Lamont, M. Borbach, R. Martin, P. Gardner, T.S. Jones, H. Conrad and A.M. Bradshaw 215

Vibrational dynamics of H atoms chemisorbed on metal (110) surfaces
E.S. Altshuler, D.L. Mills and R.B. Gerber 229

Contents continued on final page

0039-6028(19970310)374:1-3;1-W

Coverage dependence of surface structures and vibrations of Cl/Ni(100) studied by Cl K-edge SEXAFS
T. Yokoyama, S. Terada, Y. Okamoto, M. Sakano, T. Ohta, Y. Kitajima, M. Tischer and K. Baberschke 243

Electronic properties of Sn/Si(100) ordered interfaces
M. Pedio and A. Cricenti 251

Morphology phase diagram of a model for diffusion and growth of silicon on Si(100)-(2 × 1)
J.L. Iguain, C.M. Aldao and H.O. Mártin 259

Interaction of oxygen with the system Si(100)/Fe(film)
K. Rührnschopf, D. Borgmann and G. Wedler 269

Si ad-dimer interactions with steps and islands on Si(001)
B.S. Swartzentruber 277

Silicon epitaxy on hydrogen-terminated Si(001) surfaces using thermal and energetic beams
M.V.R. Murty and H.A. Atwater 283

Power-law behavior of step roughening with surface diffusion
K. Nishino, M. Uwaha and Y. Saito 291

Hydrocarbon adsorption on Si(001): when does the Si dimer bond break?
A.J. Fisher, P.E. Blöchl and G.A.D. Briggs 298

Ar^+-ion impact desorption of Au and Ag from the Si(111)-$(2\sqrt{3} \times 2\sqrt{3})$-(Au, Ag) surface
D. Ishikawa, J. Yuhara, K. Soda and K. Morita 306

A Monte Carlo simulation method for {111} surfaces of silicon and other diamond-cubic materials
D.L. Woodraska and J.A. Jaszczak 319

Vibrational dynamics of the CH stretching mode of H-terminated diamond surfaces
L.V. Zhigilei, D. Srivastava and B.J. Garrison 333

Sb on Si(111) studied by branching-ratio photoelectron holography
D.-A. Luh, M.T. Sieger, T. Miller and T.-C. Chiang 345

Relation between chemical surface diffusion coefficient and order of the adsorbate layer
P.L. Cao, M. Qiu and D.H. Shi 350

Adsorption and reaction of thiophene on the Fe(100) surface: selective dehydrogenation and polymerization
L.C. Cheng, A.B. Bocarsly, S.L. Bernasek and T.A. Ramanarayanan 357

Adsorption of atomic and molecular oxygen on the MgO(001) surface
L.N. Kantorovich and M.J. Gillan 373

Observations of cleavage steps, slip traces and dislocation hollow cores on cleaved {100} faces of L-arginine phosphate monohydrate single crystals by atomic force microscopy
K. Sangwal, J. Torrent-Burgués, F. Sanz and J. Servat 387

Arsenic incorporation kinetics in GaAs(001) homoepitaxy revisited
E.S. Tok, J.H. Neave, J. Zhang, B.A. Joyce and T.S. Jones 397

Atomic adsorbate identification with the STM: a theoretical approach
P. Sautet 406

Semiconductor substrate cleaning and surface morphology in molecular beam epitaxy
S. Ritchie, S.R. Johnson, C. Lavoie, J.A. Mackenzie, T. Tiedje and R. Streater 418

Morphological equilibration of rippled and dimpled crystal surfaces: the role of terrace-width fluctuations
J.D. Erlebacher and M.J. Aziz 427

Non-equilibrium effects on thermal desorption spectra
B. Meng and W.H. Weinberg 443

The effect of a band edge of surface electronic states on charge exchange in atom–surface collisions
M.Yu. Gusev, D.V. Klushin, S.V. Sharov and I.F. Urazgil'din 454

Author index 461

Subject index 464

Materials index 470